W	ork	Order	ID	125083
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\*40500\*

	· 07, 2014 10:34:52 AM		*125	<b>いいおける</b>						Page I
Revision ID:	D3580-3 loggle Bracket	£	Accept	*N900	<b>040</b>	100	<b>)*</b> S	etup Star Sto	14	S1* S2*
	10/06/14 <b>Start Qty:</b> 48.00	*48* *48*		Cust Item I Customer:	D:					• •
Approvals:	Process Plan: 45	Date: 14-10-07	Tooling: SPC (Y/N):		ate:		R	un Sta	" <b>" [</b> ]	R1* R2*
Sequence ID/ Work Center ID	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr									
D3580	С									
*100*	FLOW WATER JET		0.00				5 <b>%</b>	<u></u>	u/a	14/10/10
Waterjet FLOW CNC Waterje	Memo  1-Cut D358  Dwg Rev:_ Prog Rev:_ 2-Deburr if	C	0.00						1	
110	QC2- Inspect parts off n	nachine FAI/FAIB	0.00						,	1 1
*110* QC Quality Control	Memo		0.00				<u> 58</u>		n/on	14/10/10
120 *120*	QC8- Inspect parts - sec	cond check	0.00				(\$7)	)		DAS 38 9-89 14-10-10
QC Quality Control	Memo		0.00				0,			

DQA:			Date:			WORK ORDER MON	~	אורטו		IDDATE				***	DART
QA Closed:			Date:			WORK ORDER NON	-((	JINFOI	RIVIAINCE / U		Wo	ork Order up	odate only	$\neg$	AEROSPACE
						DISPOSITION						PARTMENT			
Work Orde	er:						1					i I	_		
						Rework			Skid-tube	Crosstube		_ •	Water Jet	_	Engineering
Part N	10	· · · · · · · · · · · · · · · · · · ·				Scrap			Machining	Small Fab	-		d. Eng. Coor.	_	Quality
NICD N	lo.					Use-as-is		i hern	noforming	Finishing	$\overline{}$	Rec/Stor	re/Packaging	_	Other
NCR N	NO					Suspected Unapproved	J		Large Fab	Composite			Supplier	لــ	
Root					Desci	ription of work order update	1	nitial	Ac	tion		Sign &			
Cause	Da	te	Step	Qty		or non-conformance	Ch	ief Eng	Desc	ription		Date	Verification		QC Inspector
Design															
Doc/Data															*
Equip/Tooling															
Handling/Pre															
Material															
Operator		·				·						ľ			
Offset/Setup															
Process															
Supplier															
Training															
Transport		ļ													
Unapproved															
							FAL	JLT CAT	regory						
Landii	ng Gear					General		1		ı		ì	_	_	
	Bend	_				Bend	<u></u>		rogram			Outside Dim	<u> </u>	_	Pressure/Forced
			Concen	ntric	-	BOM/Route	ļ	Grain				Over/Under	-	_	Set-up
	Crack			_	<u> </u>	Broken/Damage/Defect		Hardwa				Part Incorred	<b>-</b>	$\neg$	Temperature/Cure
			/Ripple,	/Wave		Burrs			ion Incomplete/U	,		Part Lost/Mi	ssing	⊣	Weld
	Cuffs				<u> </u>	Contamination		1	ions Incomplete/		$\overline{}$	Part Moved	L	\	Wrong Stock Pulled
	Crust	-				Countersink	<u> </u>	-	ned/off center			Positioned W			
		Treat			<u> </u>	Cut Too Short	<u></u>	Mislabe				Power Loss/:	Surge		Other
	<b>├</b> ─┤		Strip in	Tube	<u> </u>	Drawing	-	Misread							
	<b>⊢</b> ⊣	s/Chat			<u> </u>	Drill Holes	-	Off-set							
	<del></del>	-	quence		<u> </u>	Finish		•	Calibration						
	l IM/av	-/Twist	t in Tuh	e	ı	Fit/Function	1	Out of	Seguence						

Work Order	ID	125083
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FINISH TIME:

\*125083\*

Page 2

Tuesday, Octob	per 07, 2014	10:34:52 AM		"125					- "6	
Item ID: Revision ID: Item Name:	D3580-3  Joggle Brack	ret		Accept	*N900	<b>04010</b>	) <b>()</b> *	Setup Start Stop	10'21	
Start Date: Required Date Reference:	10/06/14	<b>Start Qty:</b> 48.00 <b>Req'd Qty:</b> 48.00	*4! *4!		Cust Item I Customer:	ID:				
Approvals:		lan:		Tooling: SPC (Y/N):		ate:		Run Star Stop		
Sequence ID/ Work Center I 130 *120* Small Fab Small Fab	ID	Operation Description  Small Fab  Memo Bend as per	dwg D3580 using 1/	Set Up/ Run Hours 0.00 0.00	Tool ID	Tool # Pla Coo DAS 30 9-89		Reject Qty	Reject Insp. Number Stamp	idlol is
140 *1 40* QC Quality Control		QC5- Inspect part comp	leteness to step on W	0.00 0.00			57		DAS <b>38</b> 9-89	_14-10-15
145  *1 45  Powdercoat  Powder Coating		Black Sandtex(Ref:4.3. M 12 7 Memo START TI OVEN TE	189). 1:45	0.00			57.	\$ 14	V-15.	25.00 20.00

DQA:			Date:				WORK ORDER NON-CONFORMANCE / UPDATE							SAPT		
						WORK ORDER NON-	-C(	ONFO	RMANCE / U	PDATE				'	AEROSPACE	
QA Closed:			Date:								W	ork Order up	odate only			
Work Orde	ır.					DISPOSITION		:		AGAINST	DE	PARTMENT	/PROCESS			
Work Orac	-''-					Rework			Skid-tube	Crosstube			Water Jet	7 F.	ngineering	
Part N	١o.					Scrap			Machining	Small Fab		Pro	d. Eng. Coor.	╣ ``	Quality	
						Use-as-is			noforming	Finishing			re/Packaging	7	Other	
NCR N	۱٥			,		Suspected Unapproved			Large Fab	Composite			Supplier			
Root					Desc	ription of work order update		Initial	Λ.σ.	tion		Sign 9		1		
Cause		Date	Step	Qty	Desci	or non-conformance	l	nief Eng	İ .	ription		Sign & Date	Verification		QC Inspector	
Design		Date	жер	Qty		of non-comormance	Ci	HET LINE	Desc	приоп		Date	Vermeation	+ -	.QC IIIspector	
Doc/Data	_				:											
Equip/Tooling	$\dashv$													1		
Handling/Pre																
Material														:		
Operator																
Offset/Setup														1		
Process																
Supplier														1		
Training																
Transport			·										-			
Unapproved																
							FA	ULT CAT	regory							
Landir				,	_	General		3		ı		,	_			
	_	Bending				Bend	L	Folio/F	Program			Outside Dim	ensions	Pres	ssure/Forced	
		Centre No	ot Concer	ntric		BOM/Route	_	Grain				Over/Under	tolerance	Set	-up	
	—	Cracks			<u> </u>	Broken/Damage/Defect	<u> </u>	Hardwa			_	Part Incorred	<b>├</b>	Ten	nperature/Cure	
				Burrs		4	ion Incomplete/U	· ·	_	Part Lost/Mi	ssing	We				
	$\vdash$	Cuffs			<u> </u>	Contamination			ions Incomplete/	Unclear		Part Moved		Wro	ong Stock Pulled	
	_	Crushing			$\vdash$	Countersink	_	1 1	ned/off center			Positioned V		_		
	$\vdash$	Heat Trea			<u> </u>	Cut Too Short	<u> </u>	Mislabe			L	Power Loss/	Surge	Oth	er ,	-
		nspectio		Tube	<u> </u>	Drawing	<u> </u>	Misread								-
	$\vdash$	Marks/Ch		•	·	Drill Holes	_	Off-set								-
	$\blacksquare$	Γurning S				Finish	<u> </u>	4	Calibration							
Wave/Twist in Tube					- 1	Fit/Function Out of Sequence										

Work Orde Tuesday, Octobe						Page 3						
tem ID: Revision ID: (tem Name: Start Date: Required Date:	D3580-3  Joggle Bracket  10/06/14  10/06/14	Start Qty: 48.00 Req'd Qty: 48.00	*48* *48*	Accept	*N9000  Cust Item II Customer:		100	)*	Setup	Start Stop		S1* S2*
Reference:			"4 <b>^</b> "									
Approvals:	Process Plan	n:	Date:	Tooling:	Da	te:			Run	Start	*N	R1*
	QC:		Date:	<b>SPC</b> (Y/N):	Da	te:				Stop	*N	R2*
Sequence ID/ Work Center I	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accep Qty	t Re Qt		Reject Number	Insp. Stamp
147 <b>*1 17*</b> QC		QC3- Inspect Part Finish		0.00				(5	$\mathcal{D}_{-}$	14.10	<i>حا-</i> ر	PD
Quality Control		Мето		0.00								
148		QC5- Inspect part complet	eness to step on W/O	0.00								-1
*14 <b>2</b> *		Memo		0.00				(2	ソ	14-1	91-0	10

150

Identify as per dwg & Stock Location:

\*150\* Packaging

Quality Control

Packaging

Memo

0.00

DAS 30 9-89

DQA:			Date:										NA DT
						WORK ORDER NON	-CO	ONFO	RMANCE / UPDATE	E			A E R O S P A C E
QA Closed:			Date:							W	ork Order up	odate only	
Work Orde	er:					DISPOSITION			AGA	AINST DE	PARTMENT	/PROCESS	
	-					Rework	1		Skid-tube Cross	stube	1	Water Jet	Engineering
Part N	No.					Scrap	1		<b></b>	ıll Fab	Pro	d. Eng. Coor.	Quality
						Use-as-is	1		~ <del>  </del>	ishing	1	re/Packaging	Other
NCR N	No					Suspected Unapproved	]		Large Fab Comp	oosite	]	Supplier	
Root					Desci	ription of work order update		Initial	Action	.,	Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	nief Eng	Description		Date	Verification	QC Inspector
Design													
Doc/Data													
Equip/Tooling													
Handling/Pre	Ц												
Material	Ц												
Operator	Ц												
Offset/Setup	Н												
Process	Щ												
Supplier	_												
Training -			; ;						· .				
Transport	-												
Unapproved				<u> </u>			EAL	III T CA	L FEGORY				
Landi	ng G	ear				General	FA	OLI CA	IEGONT				
Larran		Bending				Bend		] Folio/F	Program		Outside Dim	ensions [	Pressure/Forced
	$\vdash$	_	ot Concer	ntric	<u> </u>	BOM/Route	-	Grain	Togram		Over/Under	ļ	Set-up
	$\vdash$	racks			<u> </u>	Broken/Damage/Defect		Hardwa	nre		Part Incorred	<u> </u>	Temperature/Cure
	$\vdash$		nk/Ripple	/Wave		Burrs		-1	ion Incomplete/Unqualifie	d	Part Lost/Mi	<b>⊢</b>	Weld
	$\overline{}$	Cuffs		,		Contamination		<b>-</b> 1	ions Incomplete/Unclear		Part Moved	_	Wrong Stock Pulled
	$\vdash$	Crushing				Countersink		4	ned/off center		Positioned V	∟ Vrong	
	$\square$	leat Trea	t			Cut Too Short		Mislabe	•		Power Loss/		Other
		nspectio	n Strip in	Tube		Drawing		Misrea	t		<b>.</b>		
		Marks/Ch	atter			Drill Holes		Off-set					
		Turning S	equence			Finish		Out of	Calibration				
	$\Box$	Nave/Tw	ist in Tub	e e		Fit/Function		Out of	Sequence				

			*125					Page 4			
D3580-3			Accept	*N900	<b>040</b>	100	)*	Setup			S1*
10/06/14	Start Qty: 48.00 Req'd Qty: 48.00	*48* *48*		Cust Item I Customer:	D:				•	^IV;	52^
Process Pla	nn:	Date:	Tooling: SPC (Y/N):					Run	Start Stop		R1* R2*
)	Operation Description	Work Order Paleace	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	t Reje Qty		•	Insp. Stamp
	D3580-3  Joggle Bracke 10/06/14 10/06/14  Process Pla	Joggle Bracket  10/06/14 Start Qty: 48.00  10/06/14 Req'd Qty: 48.00  Process Plan: QC: Operation Description	D3580-3  Joggle Bracket  10/06/14	D3580-3   Accept	D3580-3	D3580-3	D3580-3	D3580-3	D3580-3	D3580-3	D3580-3

0.00

Memo

\*160\*

**Quality Control** 

14/10/17 HD My-10:17

DQA:		Date:						_					DART
QA Closed:		Date:			WORK ORDER NON-	-C(	ONFO	RMANCE / U		Wo	ork Order up	odate only	AEROSPACE
					DISPOSITION						PARTMENT	•	
Work Ordei	r:					,			,		•		, <u> </u>
Part No	n				Rework Scrap			Skid-tube Machining	Crosstube Small Fab		Pro	Water Jet d. Eng. Coor.	Engineering Quality
, 4, 6, 7, 7,	· <del></del>				Use-as-is			noforming	Finishing			re/Packaging	Other
NCR N	0				Suspected Unapproved			Large Fab	Composite	-	1160/3101	Supplier	
Root				Desc	ription of work order update		nitial	Ac	tion		Sign &		
Cause	Date	Step	Qty		or non-conformance	Ch	ief Eng	Desc	ription		Date	Verification	QC Inspector
Design													
Doc/Data													į
Equip/Tooling					•								
Handling/Pre	_												,
Material													
Operator		İ									•		
Offset/Setup													
rocess													
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Jnapproved													
						FAI	ULT CAT	regory					
Landin	g Gear				General								_
_	Bending				Bend		Folio/P	rogram			Outside Dim	ensions	Pressure/Forced
L	Centre No	ot Conce	ntric		BOM/Route		Grain				Over/Under	tolerance	Set-up
	Cracks				Broken/Damage/Defect		Hardwa	re			Part Incorred	et	Temperature/Cure
	Crimp/Kir	nk/Ripple	/Wave		Burrs		Inspecti	ion Incomplete/U	nqualified		Part Lost/Mi	ssing	Weld
	Cuffs				Contamination	L	Instruct	ions Incomplete/	Unclear		Part Moved		Wrong Stock Pulled
L	Crushing				Countersink		Misalig	ned/off center			Positioned V	Vrong	
	Heat Trea	at			Cut Too Short		Mislabe	eled			Power Loss/	Surge	Other
	Inspectio	n Strip in	Tube		Drawing		Misread	i					
	Marks/Ch	natter			Drill Holes		Off-set						
	Turning S	equence			Finish		Out of 0	Calibration					
Γ	Wave/Tw	vist in Tul	oe .		Fit/Function		Out of	Seguence					

**Picklist Print** 

Tuesday, October 07, 2014 10:34:52 AM

Work Order ID: 125083

\*125083\*

Parent Item:

D3580-3

\*D3580-3\*

Parent Item Name: Joggle Bracket

**Start Date:** 10/06/14

Required Date: 10/06/14

Page 1

**Start Qty: 48.00** 

Required Qty: 48.00

**Comments:** 

IPP REV:A 14.07.03 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S18GA		Purchased	No				sf	504.5120		1			, 1
*M304S18	RGA*								**			De	_14/w/

304/316 .050 Sheet

Location	Loc Oty	Loc Code	
MAT019	494.512		
117188	3		
117766	5		
120604	5		
122325	3		
123155	3		+6-6-40-44
124572	37.5		
M126647	31.55		
M128254	51.412		
M128435	35.45		
M128864	14		
M129530	145.6		9119
M130345	160		
MAT020	10		
M126098	10		

DQA:			Date:										A DT
QA Closed:			Date:			WORK ORDER NON	-C(	ONFO	RMANCE / UP		ork Order up	udata anlu	AEROSPACE
QA Ciosea.			Date.								ork Order up	date only	1.
Work Orde	er:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
	_	<del></del>			_	Rework			Skid-tube	Crosstube		Water Jet	Engineering
Part N	lo					Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality
						Use-as-is	]	Thern	noforming	Finishing	Rec/Stor	e/Packaging	Other
NCR N	۱٥			<u></u>		Suspected Unapproved			Large Fab	Composite		Supplier	
Root					Desc	ription of work order update		Initial	Acti	on	Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	nief Eng	Descri	ption ·	Date	Verification	QC Inspector
Design													
Doc/Data	_												
Equip/Tooling	_											-	
Handling/Pre	$\dashv$												
Material	$\dashv$												
Operator	$\dashv$												
Offset/Setup Process			:										:
Supplier	$\vdash$												
Training			! !										
Transport													
Unapproved									·				
· · · · · · · · · · · · · · · · · · ·			•				FA	ULT CAT	TEGORY			·	<u></u>
Landir	ng G	ear				General							
		Bending				Bend		Folio/F	rogram		Outside Dim	ensions	Pressure/Forced
	Щ°	Centre No	ot Concer	ntric		BOM/Route		Grain			Over/Under	tolerance	Set-up
	Щ	Cracks			ļ	Broken/Damage/Defect		Hardwa	ire	ļ	Part Incorred	ct	Temperature/Cure
	_	•	k/Ripple	/Wave	_	Burrs		Inspect	ion Incomplete/Un	qualified	Part Lost/Mi	ssing	Weld
	_	Cuffs			$\vdash$	Contamination	<u> </u>	-	ions Incomplete/U	nclear	Part Moved		Wrong Stock Pulled
	Crushing			<u> </u>	Countersink	<u></u>	·	ned/off center		Positioned V	_	<del></del>	
	Heat Treat			<u> </u>	Cut Too Short	<u> </u>	Mislabe			Power Loss/	Surge	Other	
	Inspection Strip in Tube			<u> </u>	Drawing	<u>_</u>	Misread						
	$\overline{}$	Marks/Ch			<u> </u>	Drill Holes	<u></u>	Off-set					
	-		equence			Finish	<u> </u>	4	Calibration				
	۱ I۱	wave/Tw	ist in Tub	e e		Fit/Function	1	IOut of S	Sequence				

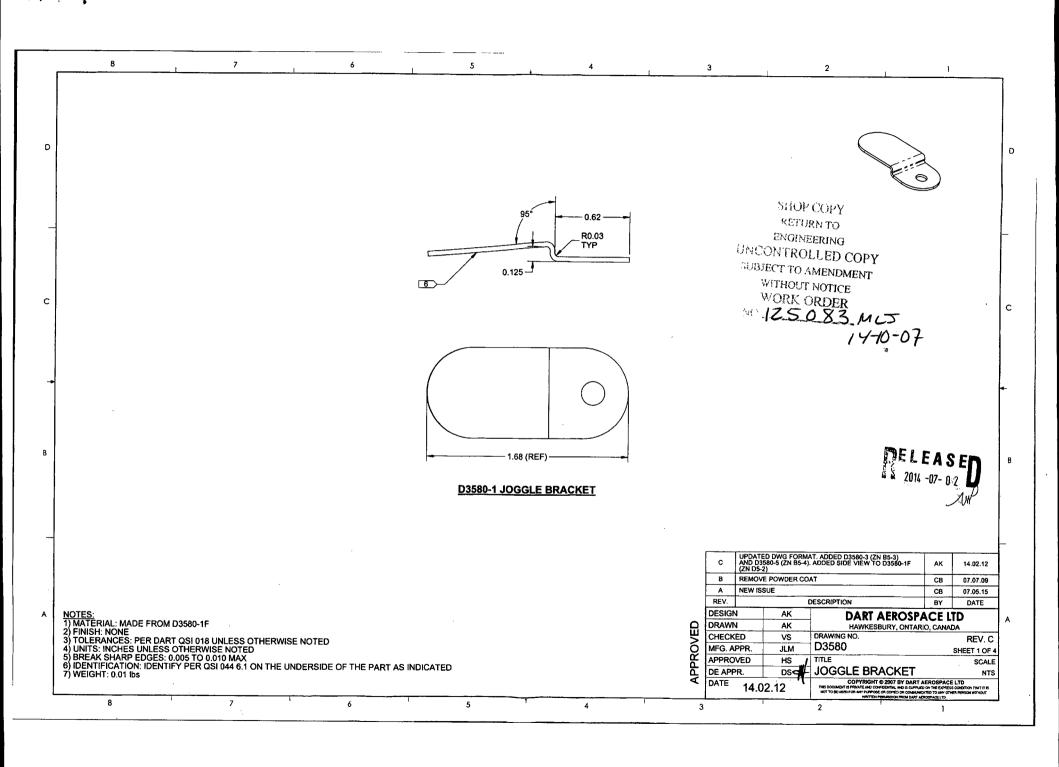
DART AEROSPACE LTD	Work Order: 125083			
Description: Joggle Bracket	Part Number:	D3580-3		
Inspection Dwg: D3580 Rev: C		Page 1 of 1		

## FIRST ARTICLE INSPECTION CHECKLIST

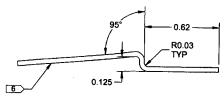
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.194	+0.005/-0.001	194	~		V=JKM-01	
0.294	+/-0.010	. ጋ9ዣ	7			
1.75	+/-0.030	1.75	/			
0.75	+/-0.030	.75	1			
0.050	+/-0.010	.55	7			
			,			
						. V 289
						· · · · · · · · · · · · · · · · · _ · · _ · · _ · · _ · · _ · · _ · · _ · · _ · · _ · · _ · · _ · · _ · · _ ·
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	_					
			DAS			

Measured by: De la	Audited by:	3 <b>8</b> 3-89	Preliminary Approval:	
Date: 14/10/09	Date:	14-10-10	Date:	

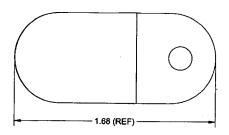
Rev	Date	Change	Revised by Approved
Α	14.07.14	New Issue	KJ <b>/ / /</b>



D 0.050 REF -- 0.72 -С 0.63 0.294 R0.38 TYP 0.75 Œ Ø0.194 В BEND LINE (REF) **D3580-1F FLAT PATTERN** NOTES:
1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, 18 GAUGE (0.050 THICK)
PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240
(REF DART SPEC M304S18GA)
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 0.01 lbs DESIGN ΑK DART AEROSPACE LTD DRAWN **APPROVED** ΑK HAWKESBURY, ONTARIO, CANADA DRAWING NO. CHECKED vs REV. C D3580 MFG. APPR. JLM SHEET 2 OF APPROVED HS TITLE SCALE JOGGLE BRACKET DE APPR DS NTS COPYRIGHT © 2007 BY DART AEROSPACE LTD
THIS DOCUMENT SHOWATE AND CONTRIBUTION ON IS SUPPLED ON THE COPIESS CONSTITUIN THAT IT IS
HOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PURSON WITHOUT DATE 14.02.12 7 3 2



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**D3580-3 JOGGLE BRACKET** 



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NOTES:
1) MATERIAL: MADE FROM D3580-1F
2) FINISH: POWDER COAT "BLACK" (4.3.5.7) PER DART QSI 005 4.3
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1 ON THE UNDERSIDE OF THE PART AS INDICATED
7) WEIGHT: 0.01 lbs

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APPROVED	DESIGN	AK	DART AEROSPACE LTD			
	DRAWN	AK	HAWKESBURY, ONTARIO, C.			
	CHECKED	VS	DRAWING NO.	REÝ, C		
	MFG. APPR.	JLM	D3580	SHEET 3 OF 4		
	APPROVED	HS ,	TITLE	SCALE		
	DE APPR.	DS-	JOGGLE BRACKET	NTS		
	DATE 14.0	2.12	COPYRIGHT © 2007 BY DART AEROSPACE LTD  195 DOGMENT IS PRIVATE AND CONCERNING THE SUPPLIES OF THE SOFTEED SOSTION THAT IT IS  NOT TO SE USED FOR ANY PURPOSE OR COPED OR COMMANDICITIES TO ANY OTHER PERSON WITHOUT  WHITE PERSON SON FROM DATE AEROSPACE LTD.			

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